



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,411	11/24/2003	Richard L. Baer	10021083-1	5096
68551	7590	08/30/2007	EXAMINER	
RatnerPrestia P.O. BOX 980 VALLEY FORGE, PA 19482			LIEW, ALEX KOK SOON	
		ART UNIT	PAPER NUMBER	
		2624		
			MAIL DATE	DELIVERY MODE
			08/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/720,411	BAER, RICHARD L.	
Examiner	Art Unit		
Alex Liew	2624		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 June 2007.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-20 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. ____.
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
5) Notice of Informal Patent Application
6) Other: ____.

The amendment filed on June 14, 2007 is entered and made of record.

Response to Applicant's Arguments

On pages 5 and 6 of the reply, the applicant stated:

[Kakarala, however, does not disclose features of amended claim 1, namely, a sensor for capturing a current image using a first exposure time, and capturing an event image using a second exposure time, where after performing a comparison between the current image and a stored reference image, the processor instructs the sensor to detect an event in the current image using a second exposure time.

Furthermore, Kakarala does not suggest a first exposure time and a second exposure time which are each defined as time periods for exposing an array of pixels to capture a respective image to produce sensor values. Further still, Kakarala does not suggest a second exposure time which is less than a first exposure time.

Shima discloses capturing event images after an event is detected. Shima, however, does not disclose any of the above described features which are missing from Kakarala.]

The applicant is correct about Kakarala and Shima do not disclose first and second exposure times. However, in the examiner's new search Hori (US pat no 7,193,652) discloses the first and second exposure times are, respectively, first and second time periods for exposing an array of pixels to capture a respective image to produce sensor values (see column 3, lines 20 to 28) and the second exposure time is less than the first

exposure time (see column 5, lines 47 to 60, the first exposure time is 1/60 of a second and the second exposure time is 1/2000 of a second).

Hori is combinable with Kakarala and Shima because the camera used in Hori is use for surveillance (see column 1, lines 14 to 17).

One skilled in the art would include capturing reference image at a higher exposure time and capturing event image at a lower exposure time because capturing images with higher exposure time causes images pixels to be brighter and capturing image at a lower exposure time causes images to be darker, so when combining (or taking the difference between the two images to find the object event) the two image to obtain the difference image (see column 5, lines 60 to 67) then resulting object image will be clearer.

The examiner will make a new rejection to incorporating the new reference Hori.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 4, 6 – 8, 10 – 13, 15, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakarala (US pub no 2004/0086152) in view of Shima (US pub no 2001/0046310) and Hori ('652).

With regards to claim 1, Kakarala discloses a surveillance system for detecting an event, comprising

- a sensor for capturing a current image producing sensor values representing said current image (see figure 1, element 200. the captured data are inputted to the video surveillance system, figure 2, element 30) and
- an image processing system for performing a comparison of at least a portion of said sensor values representing said current image and spatially corresponding sensor values of a stored reference captured (see figure 4, element 320 and 330, the difference between the current image representation coefficients are compared to the reference image representation coefficient to obtain a difference between both images), said image processing system further sends an event notification in said current image based upon said comparison (see figure 3, element 124 and 40 – an event notification is sent when the difference value is greater than threshold, figure 3, element 340).

Kakarala discloses sending an event notification, but does not take an extra step to detect more images of the scene after scene is identified to having an event. Shima discloses capturing event images after an event had been detected (see paragraph 49,

once there is a signal sent to the alarm, the alarm will switch the image recorder to recording mode to capture images of the event).

One skill in the art would include a step of capturing an event image after an event had been detected because the personnel in the security office may examine the event images to see if there is any suspicion characters (see Kakarala figure 1, element 250), so proper actions may be taken to insure the safety of the secure facility. Kakarala and Shima do not disclose first and second exposure times are, respectively, first and second time periods for exposing an array of pixels to capture a respective image to produce sensor values.

Hori discloses the first and second exposure times are, respectively, first and second time periods for exposing an array of pixels to capture a respective image to produce sensor values (see column 3, lines 20 to 28) and the second exposure time is less than the first exposure time (see column 5, lines 47 to 60, the first exposure time is 1/60 of a second and the second exposure time is 1/2000 of a second).

One skilled in the art would include capturing reference image at a higher exposure time and capturing event image at a lower exposure time because capturing images with higher exposure time causes images pixels to be brighter and capturing image at a lower exposure time causes images to be darker, so when combining (or taking the difference between the two images to find the object event) the two image to obtain the difference image (see column 5, lines 60 to 67) then resulting object image will be clearer.

Hori is combinable with Kakarala and Shima because the camera used in Hori is use for surveillance (see column 1, lines 14 to 17).

With regards to claim 2, Kakarala discloses a surveillance system of claim 1, wherein said image processing system is configured to perform said comparison by computing a difference value between at least a portion of sensor values representing said current image and spatially corresponding sensor values representing said reference image (see figure 4, element 320).

With regards to 3, Kakarala discloses a surveillance system of claim 2, wherein said image processing system is further configured to perform said comparison by determining whether said difference value exceeds threshold, said image processing system being configured to detect said event when said difference values exceeds said threshold (see figure 4, element 330).

With regards to claim 4, Kakarala discloses a surveillance system of claim 1, wherein said image processing system is further configured to replace said image with said current image (see figure 13, element 920).

With regards to claim 6, Kakarala takes images of scene until an event is detected, the selection of the first exposure time is a matter of how often the camera system detects an object in a scene, if there is people are detected in the scene quite often, a shorter

first exposure time is selected and if people are not detected as frequent, a longer first exposure time is selected. The selection of the second exposure time is the time duration of the event notification was sent.

With regards to claim 7, an extension to the arguments of claim 1, Shima discloses a storage medium for storing said event image (see paragraph 49, the image recorder is switch to recording status, event images are recorded and place in a storage medium).

With regards to claim 8, Kakarala discloses a surveillance system of claim 1, further comprising a transmission interface for transmitting event notification to an external security system and combined with Shima's recording status to captured and store event images, Kakarala and Shima disclose the claimed invention of claim 8, for sending event images to the security center (see figure 1, element 250, is where current and event images are received).

With regards to claim 10, see the rationale and rejection for claim 1.

With regards to claim 11, see the rationale and rejection for claim 2.

With regards to claim 12, see the rationale and rejection for claim 3.

With regards to claim 13, see the rationale and rejection for claim 4.

With regards to claim 15, see the rationale and rejection for claim 8.

With regards to claim 16, see the rationale and rejection for claim 15. In addition, it is well known in the art to transmit data through a wireless channel (MPEP 2144.03). One skill in the art would transmit data through a wireless channel is because to reduce the cost of cable wires and labor of placing / connecting them from the security office to the camera.

With regards to claim 18, see the rationale and rejection for claim 2.

With regards to claim 19, see the rationale and rejection for claim 3.

3. Claims 5, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakarala ('152) in view of Shima ('310) and Hori ('652) as applied to claim 1 further in view of Hansen (US pat no 6,081,606).

With regards to claim 5, Kakarala discloses all of the claim elements / features as discussed above in rejection for claim 1 and incorporated herein by reference, but fails to disclose illuminating an area after an event is detected. Hansen discloses illuminating an area after an event is detected (see column 2 lines 37 to 41) and Shima discloses taking images after an event is detected (see paragraph 49). The combination of

Kakarala, Shima and Hansen discloses the claimed invention of claim 5. One skill in the art would include a step of illuminating an area after an event is detected because capturing an image in a low illuminated area will result in low signal to noise ratio to the image, providing an illuminator will increase signal to noise ratio and improve image quality.

With regards to claims 14 and 17, see the rationale and rejection for claim 5.

4. Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakarala ('152) in view of Shima ('310) and Hori ('652) as applied to claim 1 further in view of Waxman (US pat no 5,909,244).

With regards to claim 9, Kakarala discloses all of the claim elements / features as discussed above in rejection for claim 1 and incorporated herein by reference, but fails to disclose illumination provided from one centi-lux to one lux. Waxman discloses illuminating an area under surveillance between one centi-lux to one lux (see column 4 lines 64 to 67). Waxman also suggests having low-light illumination is critical in image surveillance (see column 3 lines 16 to 19). One skill in the art would include a step providing low illumination to an observe area because to prevent people from passing the camera from noticing, that way a suspicion character will be caught off guard, does not notice the camera, when performing a criminal act, allowing security to take necessary actions.

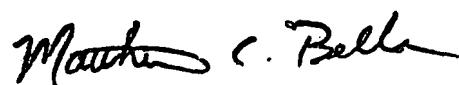
With regards to claim 20, see the rationale and rejection for claim 9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Liew whose telephone number is (571)272-8623. The examiner can normally be reached on 9:30AM - 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alex Liew
AU2624
8/23/07

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600